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10/543,168	02/28/2006	Jun Fujimoto	03450/NGB	5513

  

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EXAMINER	
WYATT, KEVIN S	

  

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/543,168	Applicant(s) FUJIMOTO ET AL.	
	Examiner Kevin Wyatt	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11,13,14,17-20 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11,13,14,17-20 and 22-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/07</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is in response to the Amendment after non-final and remarks filed on 11/14/2007. Currently, claims 11, 13-14, 17-20 and 22-26 are pending.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11, 13-14, 20 and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Voser (U.S. Patent No. 6,172,745 B1).

Regarding claim 11, Voser shows in Fig. 1, a discrimination sensor that optically detects a surface structure of an object by scanning a surface of the object, the discrimination sensor comprising: a sensor unit (4, i.e., sensing module) having an optical path opening wider in a direction perpendicular to a scanning direction (6) along which the object (2, i.e., banknote) is scanned than in a direction parallel to the scanning direction; an integrated light emitting (8 and 10, i.e., source array) and detecting unit (12, i.e., photodetectors) located in the sensor unit and including at least one light detector detecting light; emitted by the at least one light emitter (8,10) and that is reflected from the object (2), and a focusing optical system (combination of light emitting ends (24) and (26), of light guides (16) and (18) and linear lens array (20)) comprising a transparent body in which the at least one light emitter and the light detector are

disposed, the transparent body including a first lens surface (groove (88)) that focuses the light emitted from the at least one light emitter towards the optical path opening ((area between light-emitting ends (24) (26))), and a second lens surface (surface of (20)) that focuses light that is emitted from the at least one light emitter, that is reflected from the object (2), and that is incident on the detector (12).

Regarding claim 13, Voser discloses the at least one light emitter individually emits a plurality of sensing light beams having wavelengths that differ from each other; and the light detector detects the sensing light beams reflected from the object independently when reflective sensing light beams are individually emitted (col. 5, lines 42-56).

Regarding claim 14, Voser discloses that the light detector sequentially detects the sensing light beams reflected from the object when respective sensing light beams are individually emitted (col. 6, lines 7-13).

Regarding claim 20, Voser shows in Fig. further comprising a computation/determination unit that performs a computation on a discrimination signal from the light detector when light reflected from the object is detected, and determines whether the discrimination signal is within a predetermined tolerance range (col. 7, lines 57-62).

Regarding claim 24, Voser shows in Fig. 1, the first and second lens surfaces (16, 18) are adjacent each other.

Regarding claim 25, Voser shows in Fig. 1, the at least one light emitter includes a first light emitter (8) emitting light at a first wavelength and a second light emitter

(10) emitting light at a second wavelength (col. 5, lines 38-47), the focusing optical system includes a third lens surface (20) that focuses the light emitted from the second light emitter (10) towards the optical path opening (area between light-emitting ends (24) (26)), the first lens surface focuses the light emitted from the first light emitter towards the optical path opening, and the first and second light emitters are disposed in the transparent body (16, 18).

Regarding claim 26, Voser shows in Fig. 1, wherein the light detector (12) is disposed between the first and second light emitters (8 and 10), the second lens surface is adjacent the first and third lens surfaces, and the light detector is disposed between the first and second light emitters.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-19 and 22-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Voser (U.S. Patent No. 6,172,745 B1).

Regarding claims 17, Voser discloses the claimed invention as stated above. Voser does not disclose that the plurality of sensing light beams includes a first sensing light beam having a wavelength in a range from substantially 700 nm to substantially

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1600 nm, and a sensing light beam having a wavelength in a range from substantially 380 nm to substantially 700 nm. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum "ranges, or measurements" involves only routine skill in the art. It would have been obvious to one skilled in the art to provide sensing light beams having a wavelength of substantially 700 nm to substantially 1600 nm and from substantially 380 nm to substantially 700 nm. It would have been obvious to one skilled in the art to provide sensing light beams having a wavelength of substantially 700 nm to substantially 1600 nm and from substantially 380 nm to substantially 700 nm for the purpose of obtaining additional information on surface features or characteristics from reflected light mainly detected at certain wavelengths.

Regarding claims 18 and 22, Voser discloses the claimed invention as stated above. Voser does not disclose that the plurality of sensing light beams includes a first sensing light beam having a wavelength band in a range from substantially 800 nm to substantially 1000 nm, and a second sensing light beam having a wavelength band in a range from substantially 550 nm to substantially 650 nm. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum "ranges, or measurements" involves only routine skill in the art. It would have been obvious to one skilled in the art to provide sensing light beams having a wavelength of substantially 800 nm to substantially 1000 nm and substantially 550 nm to substantially 650 nm for the purpose of obtaining additional information on surface features or characteristics from reflected light mainly detected at certain wavelengths.

Regarding claims 19 and 23, Voser discloses the claimed invention as stated above. Voser does not disclose that the plurality of sensing light beams includes a first sensing light beam having a wavelength of substantially 940 nm, and a second sensing light beam having a wavelength of substantially 640 nm. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum "ranges, or measurements" involves only routine skill in the art. It would have been obvious to one skilled in the art to provide sensing light beams having a wavelength of substantially 640nm or 940nm for the purpose of obtaining additional information on surface features or characteristics from reflected light mainly detected at certain wavelengths.

### ***Response to Arguments***

6. Applicant's arguments, see pages 7-9, filed 11/14/2007, with respect to the rejection of claims 11, 13 and 20 under 35 U.S.C. 102(b) and 14, 17-19 and 22-23 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Voser (U.S. Patent No. 6,172,745 B1).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Montgomery (Publication No. U.S. 2004/0175093 A1) discloses scanning heads.

Otori (U.S. Patent No. 6,628,903 B1) discloses an image forming apparatus having a sensor for sensing an amount of reflected light from both a photoconductive element and a paper.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Wyatt whose telephone number is (571)-272-5974. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571)-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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